Patent Claims

1. A plate element (10) for a fuel cell stack, comprising:

a frame region (11) and at least one inner region which is enclosed by the frame region (11),

a plurality of webs (13) which extend from the frame region (11) into the at least one inner region and define, in the at least one inner region, a flow guidance structure (14) which is formed by recesses between the webs (13),

at least four bore holes (15, 16, 17, 18) in the frame region, of which at least two (16, 18) are connected with the flow guidance structure (14).

2. A plate element according to Claim 1 in which the flow guidance structure contains at least one meandering flow channel.

3. A plate element according to one of the Claims 1 and 2 which consists of a conductive material.

4. A plate element according to Claim 3 which consists of a metal or a metallic compound.

5. A plate element according to one of the Claims 1 and 2 which consists of an insulating material.

6. A plate element according to one of the Claims 1 and 2 which is made as a laminate of a conductive layer and an insulating layer.

7. A plate element according to one of the Claims 1 and 2 which is made as a laminate of an insulating layer and two conductive layers which embed the insulating layer as if in a sandwich.

8. A plate element according to one of the previous claims with at least one rib which extends from the frame region outwards.

9. A plate element according to Claim 8 with ribs on at least two opposite sides of the frame region.

10. A plate element according to Claim 9 in which the ribs are positioned offset to each other on opposite sides of the frame region.

11. A fuel cell stack assembly, comprising:

a membrane electrode unit which is connected at least on one side with the conductive side of a plate element according to one of the Claims 1 to 4 and 6 to 10.